

IN THE CLAIMS:

1 Please cancel claims 1, 4-9 and 13-20 without prejudice.

1 1-2. Cancelled

1 3. (Previously Presented)

2 A method for charging and maintaining the operation of a battery-powered elec-
3 tronic application device, including the steps of:

4 (A) providing a controllable switching device;

5 (B) providing a plurality of power sources each coupled to said application
6 device via said controllable switching device, said plurality of power
7 sources including at least two of the following;

8 (i) an AC power source;

9 (ii) a DC power source;

10 (iii) a direct oxidation fuel cell; and

11 (iv) a rechargeable battery; and

12 (C) switching said controllable switching device to select between said plural-
13 ity of power sources to provide operating power to said application device or to charge
14 said rechargeable battery;

15 (D) selecting as a primary power source, said AC power source and determin-
16 ing whether said AC power source is available;

17 (E) if said AC power source is available, selecting said AC power source to
18 power said application device; and

19 (F) if said AC power source is not available, determining whether said DC
20 power source is available and if so, selecting said DC power source to power said appli-
21 cation device;

1 (G) if said DC power source is not available, determining whether said re-
2 chargeable battery is sufficiently charged to power said application device and if so, se-
3 lecting said rechargeable battery to power said application device; and

4 (H) if said rechargeable battery is not sufficiently charged, responsively sig-
5 naling said direct oxidation fuel cell to begin generating electricity to provide current to
6 power said application device.

1 4-9 Cancelled

1 10. (Currently Amended) A system for powering an electronic application device,
2 comprising:

3 (A) an input adaptable to receive power from an AC power source;

4 (B) an input adaptable to receive power from a DC power source;

5 (C) a direct oxidation fuel cell system;

6 (D) a means by which said system may be electrically connected to said elec-
7 tronic application device; (~~i.e. a wire; hot pads, etc~~)

8 (E) a switching device connected to said AC input, said DC input and said fuel
9 cell wherein said switching device is operable to select between a first state in which cur-
10 rent flows through said switching device from said AC input, a second state in which cur-
11 rent flows from said DC input and a third state in which current is drawn from said fuel
12 cell system; and

13 (F) a microprocessor coupled to said switching device and programmed to se-
14 lect between said AC power source, said DC power source and said fuel cell system, de-
15 pending upon predetermined conditions; and

16 a rechargeable battery connected to said input from said DC source, said input
17 from AC power source and with said fuel cell system, and said microprocessor being
18 programmed to select the rechargeable battery to power the application device if said DC
19 source and said AC source are not available,; wherein said microprocessor is further pro-
20 grammed to signal one of said DC power source, AC power source and fuel cell system
21 to deliver power to charge said rechargeable battery while the application device is con-

22 nected to one of the other non-selected sources so that the battery will be charged as the
23 application device is being powered.

1 11. (Currently Amended) The system as defined in claim 810, further comprising a
2 power combiner and conditioner which is adapted to perform signal processing and signal
3 conditioning to the power source selected by said microprocessor such that the power
4 signal is compatible with the specifications of the application device.

1 12. (Currently Amended) The system as defined in claim 810, wherein said direct
2 oxidation fuel cell system includes
3 (A) a fuel source;
4 (B) a housing;
5 (C) a direct oxidation fuel cell comprising a protonically conductive, elec-
6 tronically non-conductive membrane electrolyte having an anode aspect and a cathode
7 aspect, and a catalyst coating being disposed on the anode and the cathode aspects such
8 that when fuel is introduced to the anode aspect an anodic disassociation of the fuel into
9 carbon dioxide protons and electrons occurs and a cathodic combination of protons, elec-
10 trons and oxygen produces water whereby current is produced from the electricity gener-
11 ating reactions to provide current to a load associated with the fuel cell system.

1 13-20 Cancelled

1 21. (Currently Amended) ~~The powering unit as defined in claim 16~~ The system as de-
2 finied in claim 12, wherein said further comprising a modular interface further comprises
3 having a smart cable that includes a set of pins for providing a desired voltage for said
4 application device.